SEQUENCE LISTING

<110> Allen, Keith D.
      Leviten, Michael W.

<120> TRANSGENIC MICE CONTAINING CASH GENE
      DISRUPTIONS

<130> R-714

<150> US 60/254,902
<151> 2000-12-11

<160> 4

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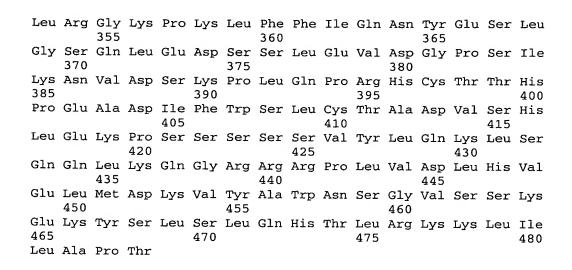<211> 2770
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<212> PRT
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Val Thr Glu Asn Leu Ala Ala Pro Asn Val Arg Asp Leu Leu Asp Ser
            35                  40                  45
Leu Ser Glu Arg Gly Gln Leu Ser Phe Ala Thr Leu Ala Glu Leu Leu
        50                  55                  60
Tyr Arg Val Arg Arg Phe Asp Leu Leu Lys Arg Ile Leu Lys Thr Asp
65                  70                  75                  80
Lys Ala Thr Val Glu Asp His Leu Arg Arg Asn Pro His Leu Val Ser
                85                  90                  95
Asp Tyr Arg Val Leu Leu Met Glu Ile Gly Glu Ser Leu Asp Gln Asn
            100                 105                 110
Asp Val Ser Ser Leu Val Phe Leu Thr Arg Ile Thr Arg Asp Tyr Thr
        115                 120                 125
Gly Arg Gly Lys Ile Ala Lys Asp Lys Ser Phe Leu Asp Leu Val Ile
    130                 135                 140
Glu Leu Glu Lys Leu Asn Leu Ile Ala Ser Asp Gln Leu Asn Leu Leu
145                 150                 155                 160
Glu Lys Cys Leu Lys Asn Ile His Arg Ile Asp Leu Asn Thr Lys Ile
                165                 170                 175
Gln Lys Tyr Thr Gln Ser Ser Gln Gly Ala Arg Ser Asn Met Asn Thr
            180                 185                 190
Leu Gln Ala Ser Leu Pro Lys Leu Ser Ile Lys Tyr Asn Ser Arg Leu
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Gln Asn Gly Arg Ser Lys Glu Pro Arg Phe Val Glu Tyr Arg Asp Ser
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Gln Arg Thr Leu Val Lys Thr Ser Ile Gln Glu Ser Gly Ala Phe Leu
225                 230                 235                 240
Pro Pro His Ile Arg Glu Glu Thr Tyr Arg Met Gln Ser Lys Pro Leu
                245                 250                 255
Gly Ile Cys Leu Ile Ile Asp Cys Ile Gly Asn Asp Thr Lys Tyr Leu
            260                 265                 270
Gln Glu Thr Phe Thr Ser Leu Gly Tyr His Ile Gln Leu Phe Leu Phe
        275                 280                 285
Pro Lys Ser His Asp Ile Thr Gln Ile Val Arg Arg Tyr Ala Ser Met
    290                 295                 300
Ala Gln His Gln Asp Tyr Asp Ser Phe Ala Cys Val Leu Val Ser Leu
305                 310                 315                 320
Gly Gly Ser Gln Ser Met Met Gly Arg Asp Gln Val His Ser Gly Phe
                325                 330                 335
Ser Leu Asp His Val Lys Asn Met Phe Thr Gly Asp Thr Cys Pro Ser
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2

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Gly Ser Gln Leu Glu Asp Ser Ser Leu Glu Val Asp Gly Pro Ser Ile
        370             375             380
Lys Asn Val Asp Ser Lys Pro Leu Gln Pro Arg His Cys Thr Thr His
385             390             395             400
Pro Glu Ala Asp Ile Phe Trp Ser Leu Cys Thr Ala Asp Val Ser His
                405             410             415
Leu Glu Lys Pro Ser Ser Ser Ser Ser Val Tyr Leu Gln Lys Leu Ser
            420             425             430
Gln Gln Leu Lys Gln Gly Arg Arg Arg Pro Leu Val Asp Leu His Val
        435             440             445
Glu Leu Met Asp Lys Val Tyr Ala Trp Asn Ser Gly Val Ser Ser Lys
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Leu Ala Pro Thr
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